Application No.: NEW Docket No.: 0171-1311PUS1

AMENDMENTS TO THE CLAIMS

- 1. (Original) A charge transporting varnish comprising: a charge transporting substance made of a charge transporting oligoaniline having a number average molecular weight of 250 to 5000 or a charge transporting organic material made of the charge transporting substance and a charge transporting dopant substance, and at least one polymer selected from polyimides and polyimide precursors, the charge transporting substance or charge transporting organic material, and the polymer being dissolved or dispersed in at least one solvent.
- 2. (Original) The charge transporting varnish according to claim 1, wherein the charge transporting substance is made of an oligoaniline derivative represented by the general formula (1) or a quinonediimine derivative that is an oxidized product of the general formula (1). [Chemical Formula 1]

$$R^{1} = \begin{bmatrix} A - NH \end{bmatrix}_{n} \begin{bmatrix} B - N \end{bmatrix}_{m}^{R^{2}}$$
 (1)

[wherein R¹, R² and R³ independently represent hydrogen, a monovalent hydrocarbon group or an organoxy group, A and B independently represent a divalent group represented by the general formula (2) or (3)

[Chemical Formula 2]

$$R^4$$
 R^5 R^8 R^{10} (3)

(wherein R^4 to R^{11} independently represent hydrogen, a hydroxyl group, a monovalent hydrocarbon group, an organoxy group, an acyl group or a sulfone group, and m and n are independently an integer of 1 or over, and is such that $m+n \le 20$ is satisfied)].

3. (Original) The charge transporting varnish according to claim 2, wherein the charge transporting substance is made of an oligoaniline derivative represented by the general formula (4) or a quinonediimine derivative that is an oxidized product of the general formula (4) [Chemical Formula 3]

(wherein R¹ to R⁷, m and n, respectively, have the same meanings as defined above).

4. (Original) The charge transporting varnish according to claim 3, wherein m and n is such that m+n ≤6 is satisfied.

5. (Original) The charge transporting varnish according to any one of claims 1 to 4, wherein the polymer is contained in 0.1 to 50 wt% based on the total weight of solids in the charge transporting varnish.

- 6. (Currently Amended) The charge transporting varnish according to any one of claims 1 to 5 claim 1, wherein the polymer is made of a polyimide or polyimide precursor having a number average molecular weight of 1000 to 50000.
- 7. (Currently Amended) The charge transporting varnish according to any one of claims 1 to 6 claim 1, wherein the polymer is made of a polyimide precursor represented by the general formula (5), or a polyimide obtained by dehydration ring closure of the polyimide precursor [Chemical Formula 4]

$$\begin{array}{c|c}
 & H & O & O & H \\
\hline
Q - N & P & N \\
HO & O & O \\
\hline
 & O & O \\
\end{array}$$
(5)

(wherein P is at least one tetravalent organic group selected from those of the general formulas (6) to (12)

[Chemical Formula 5]

[in the formula (6), R¹² to R¹⁵ independently represent hydrogen, fluorine, an alkyl group that has 1 to 5 carbon atoms and may have a branched structure, or an alkoxy group that has 1 to 5 carbon atoms and may have a branched structure], Q is at least one divalent organic group selected from those of the general formulas (13) to (19)

[Chemical Formula 6]

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[wherein R¹⁶ to R³² independently represent hydrogen, fluorine, an alkyl group that has 1 to 5 carbon atoms and may have a branched structure, or an alkoxy group that has 1 to 5 carbon atoms and may have a branched structure, X independently represents –O-, -S-, -C(O)NH-, -NHC(O)-, an alkylene group that has 1 to 5 carbon atoms and may have a branched structure, or an alkylenedioxo group that has 1 to 5 carbon atoms and may have a branched structure, Y represents a group of the general formula (20)

[Chemical Formula 7]

$$\begin{array}{c|c}
 & \mathbf{x} \\
 & \mathbf{x$$

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(wherein X has the same meaning as defined above, and j is 0 or 1),

Ar¹, Ar³ and Ar⁴ independently represent a divalent benzene ring that may be substituted with W, a divalent naphthalene ring that may be substituted with W, a divalent biphenyl group that may be substituted with W or a divalent fluorene group that may be substituted with W, Ar² represents a phenyl group that may be substituted with W, a naphthyl group that may be substituted with W, a biphenyl group that may be substituted with W, a terphenyl group that may be substituted with W or a fluorene group that may be substituted with W, a terphenyl group that may be substituted with W or a fluorene group that may be substituted with W, W represents fluorine, an alkyl group that has 1 to 8 carbon atoms and may have a branched structure or an alkoxy group that has 1 to 8 carbon atoms and may have a branched structure, and i is an integer of 1 to 4] and k is a positive integer.}

8. (Original) The charge transporting varnish according to claim 6, wherein the polymer is made of a polyimide precursor represented by the general formula (21) or a polyimide obtained by hydration ring closure of the polyimide precursor

[Chemical Formula 8]

(wherein P and Q, respectively, have the same meanings as defined above, Z is at least one divalent organic group selected from the general formula (18) or (19), u^1 and u^2 are independently an integer of 1 or over, and is such that $u^1/(u^1+u^2) \ge 0.2$ is satisfied).

9. (Original) The charge transporting varnish according to claim 8, wherein the Z is at least one divalent organic group selected from those of the general formulas (22) to (27)

[Chemical Formula 9]

(wherein W' represents a hydrogen atom, fluorine, an alkyl group that has 1 to 8 carbon atoms and may have a branched structure or an alkoxy group that has 1 to 8 carbon atoms and may have a branched structure).

10. (Currently Amended) The charge transporting thin film formed by use of the charge transporting varnish defined in any one of claims 1 to 9 claim 1.

11. (Original) The organic electroluminescent device comprising at least one layer made of the charge transporting thin film of claim 10.